REMARKS/ARGUMENTS

As of the Office action mailed December 6, 2004 claims 1-5, 8-14, and 17-56 were pending with claims 1-5 and 8-14 standing rejected and claims 17-56 being withdrawn from consideration. Reexamination and reconsideration of the application as amended, and in view of the remarks herein, is respectfully requested.

Objections

Claim 1 was objected to for being vague as to what element the phrase "comprising a magnet" refers. Claim 1 has been amended herein to read "said sensor control element comprising a magnet". Support for this amendment may be found, for example, on lines 7-9 of paragraph [0008] of the published patent application. No new matter is believed entered by this amendment. Applicant respectfully requests that the objection to claim 1 be withdrawn upon reconsideration.

Rejections Under 35 U.S.C. §103(a)

Claims 1-5 and 8-14 were rejected as being obvious under 35 U.S.C. §103(a) over Tolmie (U.S. Patent No. 5,029,304) in view of Sumead. Applicants understand Sumead to refer to U.S. Patent No. 5,500,589 in the name of Sumcad, which the Examiner cited in the previous Office action mailed April 21, 2004.

In rejecting independent claim 1, the Examiner concedes that Tolmie fails to show a biasing magnet adjacent to the sensor. To remedy this deficiency, the Examiner turns to Sumcad to support the argument that "[i]t is very well known and common knowledge in the magnetic field art to use a biasing magnet with Hall sensor or Magnetoresistive sensor." Applicants

respectfully submit that how well-known it may or may not be to use a biasing magnet is not the applicable standard for determining obviousness. Making out a *prima facie* case of obviousness requires that (1) there must be some suggestion or motivation in the references to combine the reference teachings; (2) there must be some expectation of success; and (3) the combined references must teach or suggest all of the claimed limitations. Even if Sumcad discloses a biasing magnet it does not provide the requisite teaching, suggestion, or motivation to modify the device disclosed by Tolmie to include a biasing magnet. Applicants respectfully submit that no such teaching, suggestion, or motivation to combine the references exists.

Regarding the lack of teaching or suggestion to combine the references, Applicants note that in the written opinion for International patent application No. PCT/US02/41903, claim 7 of which generally corresponds to pending independent claim 1 of the instant application, claim 7 of the International application was found by the Examiner to both be novel and include inventive step. Applicants also note that the written opinion was issued on July 26, 2004, after the April 21, 2004 Office action in which Sumcad was first cited by the Examiner. It would therefore appear that even the Examiner had conceded that Tolmie and Sumcad are not properly combinable to undermine the patentability of the subject matter of pending claim 1 of the instant application.

In addition to the lack of any teaching, suggestion, or motivation to combine the disclosures, Applicants respectfully submit that the combined teachings of Tolmie and Sumcad do not provide a non-contact position sensor according to claim 1. As the Examiner conceded, Tolmie does not teach, or even suggest, the use of a biasing magnet. Sumcad discloses that a known type of sensor "incorporates a biasing magnet that is associated with a magnetically sensitive component .... Sensors which use biasing magnets respond to a change in the magnetic

field provided by a permanent magnet when a ferromagnetic object moves into a detection zone." Col. 1, l. 19-25. Accordingly, the system disclosed by Sumcad appears to rely on a magnet, a magnetically sensitive component, and a ferromagnetic object which can be moved into the detection zone of the magnetically sensitive component to change the magnetic field imparted on the magnetically sensitive component by the permanent magnet.

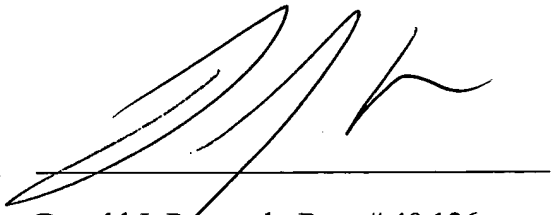
In contrast to the system disclosed by Sumcad, claim 1 recites, in part, "a plurality of sensor elements" a "sensor control element comprising a magnet" and "a biasing magnet ... biasing said at least one of said sensor elements to a selected output". As clearly described, for example in paragraphs [0079] through [0081] of the published application, "a biasing magnet" consistent with the invention of claim 1 may "reduce the magnetic filed required to activate the sensors." The use of a biasing magnet may "pre-bias the Hall sensors to turning on, thereby allowing use of a weaker primary magnet". Paragraph [0079]. Sumcad does not, alone or in combination with Tolmie, teach "a biasing magnet mounted in a fixed position adjacent at least one of said sensor elements for biasing said at least one of said sensor elements to a selected output" as recited by independent claim 1.

In view of the foregoing, Applicants respectfully submit that there is no teaching or suggestion to combine the disclosures of Tolmie and Sumcad. Additionally, even if the teachings of Tolmie and Sumcad are combined, the teachings of the references taken together do not achieve all of the aspects of independent claim 1. Accordingly, Applicants respectfully request that the rejection of independent claim 1, and of claims 2-5, and 8-14 ultimately depending upon claim 1, as obvious under 35 U.S.C. §103(a) be withdrawn upon reconsideration.

Having overcome all of the outstanding rejections, it is respectfully submitted that the application is now in condition for allowance. Early and favorable action is respectfully solicited.

In the event that there are any fee deficiencies, or additional fees are payable, please charge, or credit any overpayment to, our Deposit Account No. 50-2121.

RESPECTFULLY SUBMITTED,



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